

#### Make a Meadow

How to create a wildflower rich meadow

Based on notes made by Prof Ian Trueman

#### Where?

#### Survey the site for:

- Vegetation
  - meadow creation should not occur on sites with existing interest, botanical or otherwise.
  - Sites infested with perennial weeds such as thistles, docks and nettles or with a lot of highly competitive species such as Yorkshire Fog or Creeping Buttercup should be avoided
- Soil chemistry
  - pH, extractable phosphate and total nitrogen determination as a minimum.
  - Flower rich meadows are unlikely on overly fertile sites (ref to table ?? for maximum levels) [are flood / water-meadows an exception?]
- Access and topography
  - Consider whether it will be feasible to mow the site and remove the arisings every year without fail!

#### Seed source

- Ideally, use an existing old meadow as a source by strewing its freshly cut hay onto the new site.
- A suitable source site should be seriously species rich and will usually be a SSSI.
- Local Wildlife Sites are also usually of suitable quality but check this first.
- Hay meadows are easier to replicate than pastures since they tend to produce all their seed at hay time
- Keep the source as geographically local as possible to the receptor site and conditions (e.g. of soil base status and dampness) should be similar at the receptor site

#### Seed source

- You will need to take the hay from about half the area of the receptor site
- Hay from one hectare of donor meadow can be spread over two hectares of receptor site.
- The price of species-rich hay is at least double the going rate for fodder hay. At least £750 per hectare of donor site.
- Allow costs of an expert to lead the work unless you want to do it all yourself.
- Use the Make a Meadow website to help find local sources of green hay to you

## Seeds and plug-plants

- Planting individual plants, even as plant plugs, is only really appropriate in small garden-like projects and the plants require individual management (including slug control) to establish.
- Avoid using made-up seed mixtures and unapproved suppliers of seed since you have no control over quality.
- It is best to buy the species separately and make up your own seed mixture, asking about provenance and year of origin and mixing according to a model
- If in doubt about quality, do germination tests

## Preparing your site

- Remove (or at least largely remove) the existing vegetation but avoid substantial cultivation
- Glyphosate weed killer, correctly applied, will give perfect results
- Where a turf already exists, cut and remove in May-June and glyphosate the regrowth in June-July

## Preparing your site

- On a light, open-textured soil it does not seem to be necessary to raise a deep seed bed
- Chain harrow a compacted surface but avoid ploughing or rotavation which will release fertility and stimulate weed germination
- On over-rich soils, turf stripping, deep ploughing or importing of a poor substrate are possible but very expensive and not guaranteed to work.
- Wet sites are difficult to deal with and should be disturbed as little as possible in preparation.

#### Transfer day!

- The ideal time to extract hay is exactly when the owner would normally make hay on the site, which is likely to be late July.
- Hay is removed from the source site immediately after cutting. Either in bales or loose.
- Hay must be spread, very thinly, on the same day as it is cut, over twice the area from which it was cut. If you apply at higher rates you will need to remove the hay after three or four weeks (or graze it off!).

## Transfer day!

- Purchased seed can be spread by hand or using a fertiliser spreader, either in very early autumn or early spring.
- Plants should be planted individually in a large bare area if they are to survive. Slug control will be necessary for plant introductions and slugs may be a problem if the diversity of existing pastures is being enhanced.

## Initial management

- Keep a close eye on the developing vegetation and, normally, do NOT cut the developing sward until normal hay meadow management starts the following summer.
- Do not worry about annual weeds; even quite bad infestations will not persist with meadow management, but perennial weeds such as docks and Creeping Thistle (also Ragwort) will have to be opposed for example by spot treatment with appropriate herbicide.
- Make hay on the site when the Yellow-rattle has shed most of its seed - about late July in the Midlands. Or cut and remove the vegetation immediately, early in August.

# Initial management

- Repeat this management every year at the same time.
- If possible graze the regrowth from August until the site starts to show signs of poaching as winter approaches, or gang-mow throughout the autumn
- A single hay cut might be sufficient on a site with nutrient-poor soils and no serious perennial weed problem.
- Keep and archive records (Record sheet available here) and inform interested parties.

#### Further information

 For more details please refer to Natural England Technical Information Note <u>TIN063: Sward Enhancement: diversifying</u> grassland by spreading species-rich green hay